



In Reply Refer To:  
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TXX0-2018-CPA-  
0082

# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Texas Coastal Ecological Services Field Office

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Houston, Texas 77058

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September 20, 2018

Colonel Lars N. Zetterstrom  
Galveston District, Corps of Engineers  
Attn: Jayson Hudson  
P.O. Box 1229  
Galveston, Texas 77553-1229

Dear Colonel Zetterstrom:

Thank you for the opportunity to comment on the Corps of Engineers (Corps) Public Notice SWG-2013-00147, dated August 21, 2018, for Freeport LNG Development, L.P.'s proposed construction and operation of a dredged material placement area (DMPA). Construction of the project is anticipated to fill 196.5 acres of wetlands and open water. The project is located in wetlands east of the Brazos River, north of the Gulf Intracoastal Waterway (GIWW), along Levee Road, southwest of Freeport, in Brazoria County, Texas.

Our comments and recommendations are provided in accordance with the revised Department of the Interior Manual Instructions (503 DM 1), dated August 3, 1973, the Fish and Wildlife Coordination Act ((16 U.S.C. 661-667(e)), the Endangered Species Act of 1973 (ESA or Act) (16 U.S.C. 1531 et seq.), the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), and the National Environmental Policy Act (42 U.S.C. 4321-4347).

The U.S. Fish and Wildlife Service (Service) accompanied representatives from the applicant's environmental consultant, the Environmental Protection Agency, and Texas Parks and Wildlife Department on a site visit on September 7, 2018. The wetlands to be filled for the project consist of high functioning brackish marsh. The Service appreciates the applicant and their consultant facilitating timely access to evaluate the site and the applicant's efforts to analyze alternatives to the proposed fill and to put forth a compensatory mitigation proposal. Recognizing the relative scarcity of DMPA options in the Freeport area the Service still ultimately finds the proposal unacceptably destructive to Service trust resources, namely wetlands, migratory birds and potentially threatened or endangered species. For the reasons and concerns stated below the Service recommends denial of permit application SWG-2013-00147 as proposed:

- The Service reviewed the extensive alternative analysis provided by the applicant entitled "Freeport LNG Liquefaction Project and Phase II Developments, Environmental Analysis", dated June 2018. The Service recommends the Corps and applicant evaluate combinations of offshore dredged material placement, upland confined placement, new construction dredged material placement sites, and beneficial use as part of a long-term

dredged material management plan to minimize the impacts of the current proposal. The current proposed alternative is for a single site with an anticipated 15-year lifespan. We believe the applicant's operational plans for this facility far exceed 15 years and they should reasonably plan for a longer term given the regulatory timeframes and operational risks of a single designated DMPA. For example, the private DMPA/beneficial use (BU) Site A currently consists partly of an abandoned residential canal subdivision. This approximate 45-acre site (not 18.3 acres as stated in the document) bounded by Quintana Road, FM 1495, the GIWW, and Compass Ct. was previously impacted significantly by dredging and filling activities. A DMPA cell constructed here might reduce the footprint impact to higher functioning wetland resources at the proposed site, reduce the burden of compensatory mitigation, and meet other DMPA assessment criteria (proximity, zoning, site ownership, etc.) if considered as a component of a broader effort to manage dredged material.

- Similarly, BU Alternatives B, C, D, E, and F may accommodate approximately 100,000 cubic yards of dredged material each by the applicant's estimates. As a single maintenance cycle's worth of dredged material could potentially create, enhance or restore more than 650 acres of emergent estuarine marsh, the Service recommends such alternative combinations be fully evaluated, including cost, but without cost as the ultimate determining variable. The Corps and applicant must acknowledge that such wetlands provide vital services in buffering storm surge, attenuating coastal flooding, protecting vital infrastructure, and maintaining coastal resiliency as well as fish and wildlife functions. The applicant should also understand that the Service has previously financially assisted BU site developments where benefits to our trust resources are realized.
- The applicant should likewise evaluate the development of in-kind compensatory mitigation in the Freeport vicinity. One or more of the BU sites proposed could be readily utilized as a compensatory mitigation site for unavoidable impacts to the brackish marsh proposed to be impacted by the applicant's preferred alternative (i.e., private DMPA Alternative C).
- Regarding the applicant's preferred alternative, the Service is aware that the parcel owned by the applicant (Brazoria County Appraisal District parcel ID 663312) consists of 294.45 acres. The Service wants to understand why the proposed DMPA configuration was selected when the southern end of the parcel contains open water and appears to have been previously impacted by development from oil and gas or other industry. In general, emergent wetlands are more productive than open water habitats, particularly those aquatic areas previously impacted by development as those in the southern end of the parcel appear to be. Thus, the Service recommends an additional reconfigured DMPA be evaluated that minimizes the footprint impact on the highest functioning aquatic resources onsite.
- Table 1 of the June 2018 Environmental Analysis document mentioned above states that the preferred alternative contains 171.8 acres of wetlands and waterbodies to be impacted. The Corps public notice states the total is 196.5 acres of footprint impact to wetlands and other waters. Please explain the discrepancy.
- The Service would appreciate additional information regarding the Corps' determination regarding the potential use of the preferred site by the endangered Whooping crane *Grus americana*. The applicant provides site descriptions of BU Sites B, D, E and F, and

DMPA Sites B and E as potentially providing habitat for Whooping cranes and makes preliminary “may affect” determinations for each, but does not draw that conclusion for private DMPA Site C (the applicant’s preferred alternative). Private DMPA Site C includes brackish marsh and contains widespread presence of Carolina wolfberry *Lycium carolinianum*, a plant and common food item of whooping cranes.

- As a reminder to the Corps, under section 7(a)(2) of the ESA and the implementing regulations, it is the responsibility of each federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any federally listed species. Based upon an inventory of listed species and other current information, the federal action agency determines if any endangered or threatened species may be affected by the proposed action. The Service's Consultation Handbook is available online for further information on definitions and process ([http://www.fws.gov/endangered/esa-library/pdf/esa\\_section7\\_handbook.pdf](http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf)). The Service recommends that the Corps follow the consultation procedures pursuant to Section 7 of the ESA regarding any potential effects to listed species.
- The proposed compensatory mitigation plan is wholly unacceptable as the proposed wetlands to be enhanced or restored are freshwater prairie wetlands. The Service recommends the applicant develop an in-kind compensatory mitigation plan to compensate for unavoidable impacts to brackish wetlands.
- The functional assessment utilized to establish the functional value of the compensatory mitigation wetlands was the Corps’ Riverine Herbaceous/Shrub interim Hydrogeomorphic Model (iHGM). The brackish wetlands at the proposed impact site do not rely upon riverine inputs and are more appropriately within the domain of the Galveston District’s tidal fringe iHGM. The Service recommends the impact site wetlands be assessed with a more appropriate functional assessment methodology and that compensatory mitigation be in-kind and commensurate with the significant level of proposed wetland impacts.

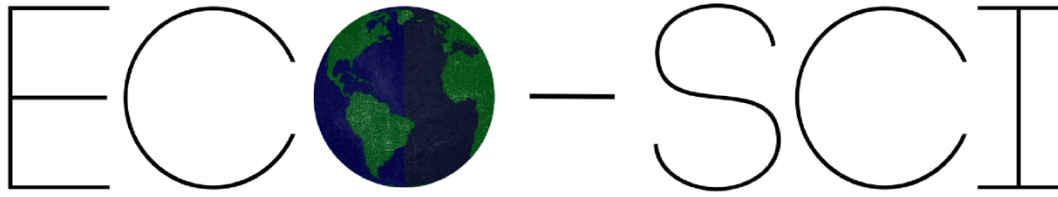
The Service anticipates additional discussions with the Corps and applicant to resolve our comments, clarify the Corps’ responsibilities under ESA section 7(a)(2), and looks forward to a response to our comments and concerns expressed herein.

Thank you for the opportunity to review and provide comments on the proposed permit application SWG-2013-00147. If you need additional information, please contact Jeff Hill, staff biologist at 281/212-1508.

Sincerely,



Charles Ardizzone  
Field Supervisor



**To: Col. Lars Zetterstrom, Galveston District Engineer**  
**Galveston District Permitting Division**

**Re: SWG-2013-00147**

Dear Col. Zetterstrom,

We are writing on behalf of the Ecological Sciences Communication Initiative, a nonprofit organization committed to transparent coverage of environmental issues. We are submitting this as a comment regarding the possible construction of the long-term Dredge Material Placement Area (DMPA) by Freeport LNG Development, LP (FLNG) and the Bastrop Bayou Responsible Mitigation Plan submitted by JMB Land Co., LP (JMB).

First, we fully recognize the identified needs and concerns relating to the proposed development. FLNG's shipping capacity has increased, meaning a greater number of marine vessels will be utilizing the FLNG Berth. In reading through the development plan, we concede that FLNG has, indeed, considered a vast array of alternatives to the proposed development, taking into consideration environmental, socioeconomic, and historical impacts alike, for each individual site. Additionally, FLNG has been proactive in introducing the Responsible Mitigation Plan developed by JMB to further reiterate their environmental commitment to the area.

Although we recognize the needs and concerns of FLNG's operations, as well as the commitment that FLNG has shown toward the area's natural resources, we must be cautious in offering our full support to the proposed development plan because a number of threatened and endangered species reside within the area of the proposed development, including *Notropis*

*oxyrhynchus* (Sharpnose Shiner) and *Pristis pectinata* (Smalltooth Sawfish). While these species have been identified and recognized in both the development and mitigation plans, this does not remove our concern for the negative impacts that this development could cause. The permit should not be approved until the conclusion of consultation with the necessary services, and we are hereby requesting results at the conclusion of consultation.

Endangered and threatened species and their ecosystems are recognized as such due to proposals such as those being considered by FLNG. The submitted plan recognizes that there will be effects on these species and their habitats; regardless of how minimal these effects are, we cannot support any action that will put these species and their habitats at further risk. To do so would be neglectful, as well as a failure to uphold the mission at the heart of our organization: the environmental protection of our planet.

Additionally, we have concerns regarding the possible degradation of water quality based on construction at any location, as any proposed development must be near a body of water, due to the site's intended function. Although neither FLNG's analysis, nor our internal analysis, found any water quality concerns in the area other than those listed, they do not negate the fact that construction activities may have unintentional negative effects on the area's water quality. Moreover, because of the location's proximity to the Gulf of Mexico, an impaired waterbody, an antidegradation analysis should be completed

The alternative site location analysis within the proposed plan was satisfactorily conducted, with detailed information being offered regarding the suitability of each site. We agree that, of the two undeveloped Federal DMPA sites considered as alternatives, neither will meet the project's needs. Beneficial use screening was also thoroughly considered, but again, no site was found to be feasible for this project.

In considering the project proposal in its entirety, we feel that the Locks Alternative is the best alternative for this project. With the main source of shoal material being deposited within

the FLNG Berth coming from the Brazos River, the installation of locks would mitigate the deposited amounts, resulting in less material to be dredged. FLNG could then extend its current contract for the disposal of material that is dredged from the FLNG Berth past 2021 and continue with its current disposal protocol, without alteration.

We understand that there are concerns with the Lock Alternative as well, although those concerns are not strong enough to completely forego the alternative of utilizing existing facilities with newly installed locks in lieu of potentially causing environmental harm. In choosing the Locks Alternative, FLNG's issues will be addressed and the construction of a new site will no longer be necessary.

We want to thank you for this opportunity to share our current position on FLNG's proposed construction, and hope that both you and FLNG take our position into consideration as this project moves forward.

For a healthier planet and warmest regards,

A handwritten signature in blue ink that reads "Darrell W Evans". The signature is fluid and cursive, with the first name "Darrell" being more prominent than the last name "Evans".

Darrell Evans  
*Policy Analyst*  
The Ecological Sciences Communication Initiative  
2312 Nashville Ave.  
New Orleans, LA  
70115



September 20, 2018

Policy Analysis Branch

Regulatory Division, CESWG-RD-E

Galveston District

U.S. Army Corps of Engineers

P.O. Box 1229

Galveston, Texas 77553-1229

By Electronic Mail to: [swg\\_public\\_notice@usace.army.mil](mailto:swg_public_notice@usace.army.mil)

Re: Lower Brazos Riverwatch's Comments on Permit Application No. SWG-2013-00147, Freeport LNG Development, LP's Establishment of a dredge spoil disposal site in wetlands to the east of the Brazos River, north of the Gulf Intracoastal Waterway, along Levee Road, and southwest of Freeport, Brazoria County, Texas.

To Whom It May Concern:

Lower Brazos Riverwatch appreciates the opportunity to submit our comments on the above referenced permit application.

***Project Understanding***

It is our understanding that Freeport LNG Development plans to construct a Dredge Material Placement Area (DMPA) of about 196.5 acres for placement of material from dredging the Brazos River. The area will be contained by 25-foot high levees with two outfall structures. They will also construct temporary and permanent site improvements including site security fences, equipment staging areas for construction and operations, and hay bale/sediment control dikes for construction and operation activities. The two outfall structures are to allow the water from the settled dredge material to be returned to the marsh.



The entire DMPA consists of wetlands, all 196.5 acres of which would be filled. The wetlands to be filled would include:

- 174.7 acres of palustrine emergent wetlands,
- 19.1 acres of palustrine scrub/shrub wetlands, and
- 2.7 acres of open water.

To mitigate for the taking of 196.5 acres of functioning marsh, the applicant proposes to create a permittee responsible mitigation site with restoration of 116.7 acres of former rice field and enhancement of 56.6 acres of herbaceous prairie wetland habitat, for a combined acreage of 173.3 acres of uncertain mitigation.

### ***General Comments***

Lower Brazos Riverwatch believes that this project does not justify the filling of the wetlands in question. This application should be denied, because it the applicant has failed to provide an adequate alternative analysis to demonstrate that the impacts are necessary and cannot be avoided through other disposal options. If the application is allowed to proceed, we believe that an EIS should be required. This is a substantial impact to coastal wetlands, not adequately analyzed or mitigated and should receive intense scrutiny before it is allowed. Finally, we would request that the Corps schedule a public hearing on this proposal to fully explore the issues associated with the project, and allow the public an adequate opportunity to be informed and respond. Lower Brazos Riverwatch would also point out that this notice was accompanied by over 600 pages of applicant supplied material. When this sort of volume is provided, the notice period needs to be extended. Private individuals and small organizations cannot adequately review this much material and comment effectively in the normal time window. We request that this comment period be extended so that the public has an adequate period in which to digest the provided material and respond effectively.

### ***Specific Comments***





### *Mitigation Plan is Inadequate to Compensate for Losses*

The mitigation proposal for this project seeks to provide mitigation for 196.5 acres of functioning marsh with 173.3 acres of potential future wetlands. Even if we assume the functional values would be similar when the mitigation project was complete, it fails to consider the temporal loss of functional values in the time between the fill and the completion of the mitigation project. It further assumes that the mitigation project will be entirely successful, which is by no means a certainty. In addition to the problem of functional inadequacy, the mitigation is not being conducted in the same watershed. This effectively deprives the impacted area of the functional values and moves them to an unaffected area. The applicant should be required to provide adequate mitigation, in the area affected by the loss of functional values. The uncertainty of mitigation success should also be considered and the applicant should be required to provide substantially more mitigation to allow for a reasonable likelihood of failure.

### *No Analysis of Effects on Flooding and Storm Surge is Provided*

The applicant has provided no analysis of the effects placing either the mitigation or the DMPA in the 100 year flood plain or storm surge zone might have on other properties in the areas. The DMPA effectively removes 4,887 acre feet of volume from the storm surge area. In addition, there is no analysis of how water deflected around the DMPA levees will behave and where it will likely be diverted. This needs to be determined and the comment period extended or reopened so that the public can be informed and provide input.

### *The Delineation Provided Has Not Been Verified Prior to Notice*

The wetland delineation by the applicant was not verified prior to the publication of the notice. Delineations need to be verified prior to sending applications out on notice. The public needs to be able to rely on the information provided and unverified delineations are not reliable.



*U.S. Land Conservancy*

We are concerned about the choice of easement holder. We have made substantial effort to find out anything about this organization and have been able to find nothing other than a single reference to their being a nonprofit based in Baton Rouge, Louisiana. We have not been able to verify them through the Land Trust Alliance. Land Trusts that are essentially industry and developer captives and that do not either negotiate appropriate easement terms, or follow appropriate standards and practices are increasingly common. This entity needs to be verified. In addition, since it is an unknown entity, the terms and conditions in the easement should be made available for review, to assure that the protections provided are adequate to assure proper defense of the public trust.

*Closing*

Lower Brazos Riverwatch appreciates the opportunity to provide our comments on this permit application. As stated above, we believe that the Corps should withdraw this application until the applicant has addresses the specific concerns raised and the Corps has verified the wetland delineation. We also believe that a public hearing should be held on this application and that given the magnitude of the impact and the uncertain and inadequate nature of the mitigation, that and EIS should be prepared.

Very truly yours,

Lower Brazos Riverwatch

Bruce R. Bodson

President/Executive Director

September 1, 2018

Policy Analysis Branch  
Regulatory Division, CESWG-RD-P  
Galveston District  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, Texas 77553-1229

Texas Commission on Environmental Quality  
401 Coordinator  
MSC-150  
P.O. Box 13087  
Austin, Texas 78711-3087

Dear Corps and TCEQ,

Enclosed are the comments of the Houston Regional Group of the Sierra Club (Sierra Club) regarding the U.S. Army Corps of Engineers (Corp) (Sierra Club), Galveston District, Section 10/404 proposed Permit Application No. SWG-2013-00147, Freeport LNG Development, L.P., dredge disposal area, in wetlands to the east of the Brazos River, north of the Gulf Intracoastal Waterway, along Levee Road, and southwest of Freeport, Brazoria County, Texas.

- 1) This proposal will:
  - a. Construct a Dredge Material Placement Area (DMPA) of about 196.5 acres for Brazos river dredging.
  - b. Construct 25-foot high levees with two outfall structures.
  - c. Construct infrastructure improvements like site security, equipment staging areas, hay bale/sediment control dikes for construction and operation activities.
  - d. Fill 196.5 acres of wetlands which includes 174.7 acres of palustrine emergent wetlands, 19.1 acres of palustrine scrub/shrub wetlands, and 2.7 acres of open water.
  - e. Release return water from the DMPA.

- f. Conduct dredging and use a dredge pipeline with a right-of-way of unknown width and length for the DMPA with unknown environmental impacts.
  - g. Create a Bastrop Bayou permittee responsible mitigation site with restoration of 116.7 acres and enhancement of 56.6 acres of herbaceous prairie wetland habitat.
- 2) **Page 2, Project Description, Public Notice**, the applicant proposes to place the project and wetlands mitigation in the 100-year floodplain and storm surge (ebb-tide) zone. Since we have now seen what can happen when a hurricane is a storm surge hurricane (Hurricane Ike) and when a hurricane is a rainfall hurricane (Hurricane Harvey) the Corps must review this and other permit applications for the effects of this development so that it does not encourage people to live in harm's way where storms, hurricanes, and floods can cause property damage, injuries, and death.

It is not an excuse for the applicant to say that it will construct 25-foot high levees. The impacts that this proposal will have on the removal of area and volume from the 100-year floodplain and storm surge zone must be analyzed and revealed to the public in this Public Notice.

The Corps should require that the applicant conduct a study, made public during the public notice comment period, that discusses the danger of putting this project in flood zones due to storms, hurricanes, sea level rise, heavy rainfalls, and impacts of climate change over the next 50 to 100 years. The applicant should state clearly the cumulative impacts that this proposal has via encouraging development (directly industrial and indirectly residential and commercial) in an area that is a sensitive ecological place (special aquatic sites and ARNI) and for people a very dangerous place to live.

The Corps should require a study about the impacts this development will have, direct and indirect (secondary), and provide cumulative impacts analysis. The Corps should require a study about the impacts this development will have, direct and indirect (secondary), and provide this information to the public for review and comment as required by the National Environmental Policy Act (NEPA).

The Sierra Club disagrees with the Corps under **Notes, Page 3**, where the Corps states that "A preliminary review of this application indicates that an environmental impact statement (EIS) is not required". An EIS is required due to the permanent, loss of a large acreage of wetlands, the presence of special aquatic sites and aquatic resources of national importance (ARNI) that will be destroyed or degraded by the proposal, the construction of the proposal in the 100-year floodplain and storm surge zone, and because the proposal enables or induces additional industrial development directly and residential and commercial development indirectly in the floodplain and storm surge zones.

- 3) **Page 2, Project Description, Avoidance and Minimization, and Mitigation, Public Notice**, the applicant does not state how much fill material will be used, how the fill material will be brought onto the site, how the applicant will discharge fill into the minimum area required, what the life of the DMPA is, how much fill material will go into the DMPA each year or on a periodic basis, how often fill activities will occur, and how much total fill material the DMPA ultimately will take.

The Corps should require that the applicant clearly describe how this proposal will be implemented and will minimize impacts other than a vague "... have avoided and minimized the environmental impacts by conducting a feasible alternative which minimized potential impacts." There is no avoidance or minimization of impacts when the applicant destroys an entire special aquatic site and ARNI. The applicant does not avoid, minimize, or save even one acre of wetlands in the project site. The applicant does not state what impacts this proposal will have on wildlife associated with wetlands like Mottled Ducks, other waterfowl, and wading birds.

The Sierra Club sees no alternatives analysis in the Public Notice or Plans presented to the public. There is no discussion in the Public Notice or Plans about other locations, locations that already are DMPA's that could be used, ocean disposal of material, beneficial uses of material for ecosystem restoration, etc.

The applicant has not conducted "due diligence" as required. A "feasible alternative" for the applicant is not an alternatives analysis and avoids and minimizes no destruction or damage to any wetlands or waters of the U.S. The applicant does not describe the specific site that it proposes to destroy under "**Current Site Conditions**". Instead the applicant gives a vague "**general area**" description. **This is insufficient for a Section 404 Public Notice, the Corps should reject the permit application as deficient, and deny the permit.**

Apparently, destruction of several hundred acres of important wetlands is simply a cost of doing business. The applicant fails to state whether the wetlands are freshwater, brackish, or saltwater or a combination of the three salinity types in the Public Notice and Plans. If the wetlands are a combination of the three salinity types, then the applicant must state how many acres are freshwater, brackish, and saltwater and where these are located on the site.

The applicant on, **Sheet 7, Plans**, shows a dredge pipeline route for the proposal but does not state how long the route is, how wide is the right-of-way (ROW), how many acres of what types of habitat will be destroyed or altered (including wetlands) in the ROW. The applicant fails to state how much dredging will be done of the Brazos River, the environmental impacts from this dredging (direct and indirect impacts), and how often this dredging will occur. If the permit application is approved the Corps should require that the applicant reseed the pipeline ROW with native grasses, herbaceous vegetation, and wetland plants as one mitigation

measure for the pipeline. A mitigation plan is needed for the pipeline portion of the proposal

The applicant, on **Page 3, 3.2 Proposed Impact Site Ecological Functions and Values** and **Page 8, 7.0 Determination of Credits**, has performed a riverine herbaceous/shrub interim model analysis of functions of the palustrine emergent and scrub/shrub wetlands and open water that will be destroyed by the proposal. The Corps should, as it has in other permit applications, provide the data sheets that document the modeling and the assumptions that were used with the Public Notice and Plans. The use of this model is not appropriate because these are not riverine wetlands. In addition, the site relies on overland flow which is much more difficult to model and thus provide accurate estimates about physical, chemical, and biological functions and hydrology.

It is also of concern that the applicant says nothing about the perpetuity of the wetlands that are offered for mitigation. With climate change, sea level rise, more and stronger storms and hurricanes, more intense rainfalls, etc., how long will these wetlands last and be in existence. Since the loss of wetlands is permanent any mitigation wetlands should also be permanent. If there is any doubt as to their permanence, then there should be a requirement placed in the permit application that requires re-establishment of mitigation wetlands when they disappear or are degraded or are destroyed.

The applicant fails to state how it will minimize or avoid spillage of dredge material from the operation. The applicant fails to state how it will clean up releases or spills of dredge material. The applicant does not state how wetland vegetation on the ROW will be restored due to temporary construction. The applicant fails to have a chart in the Public Notice or Plans that lists each wetland that will be destroyed or degraded, the size of each wetland, and the type of wetland.

The applicant fails to state how sealing off part of the 100-year floodplain and storm surge zone will affect hydrology and hydraulics of the area and adjacent wetlands and waters of the U.S. that exist outside the levees. The public must have this information so that it can review and comment on all the potential environmental impacts of the proposal.

The project site has special aquatic sites and is an ARNI and thus deserves an alternatives analysis and a mitigation plan prepared to protect Clean Water Act benefits and functions as much as possible. The Corps should require a comprehensive mitigation plan (with avoidance and minimization requirements) and alternatives analysis for this proposal. The public must have this information so that it will understand the environmental impacts of the proposal and can review and comment on the alternatives analysis, mitigation plan, and the appropriateness and adequacy of the proposal.

- 4) **Page 2, Current Site Conditions, Public Notice**, the Corps states that project information has not been verified. The Sierra Club is concerned about Corps policy that allows the release of public notices with information furnished by the applicant that has not been verified. This puts the public in an untenable situation of not knowing if the information it reviews is valid, complete, and accurate.

The Sierra Club strongly believes that verified project information should be part of all public notices. Without verified public information the public does not know whether the information that it relies upon to make public comments is accurate and true. The Corps should change its policy and verify applicant information. After all, if the Corps, the regulatory agency that issues the permit, does not verify applicant information, then who will? The public must have this information so that it can review, comment on, and understand all the potential environmental impacts of the proposal.

- 5) **Page 2, Current Site Conditions, Public Notice**, the Corps has published a Public Notice with no verified wetland delineation. The Corps should not do this because it hides from the public some of the most important information that a Public Notice is supposed to have, the number of wetlands that will be destroyed or degraded and the mitigation required for their destruction or degradation. All we have now is what the applicant says and not what the Corps has verified. The Corps should withdraw this permit application and reissue it when it has verified the wetland delineation.
- 6) **Page 3, Other Agency Authorizations**, the Corps mentions that a “return water” water quality certification is needed from the Texas Commission on Environmental Quality under Section 401 of the Clean Water Act. However, the Corps does not state what impacts return water can have on wetlands, special aquatic sites, ANRIs, and other ecosystems and how these impacts will be addressed. The public must have this information in the Public Notice or Plans so that it has an opportunity to review and comment on the potential environmental impacts and any mitigation.
- 7) **Page 4, Threatened and Endangered Species**, the Corps should require threatened and endangered species surveys for listed species. The results of these surveys should be reported in the Public Notice and the public given the opportunity to review and comment on the results.
- 8) **Page 4, Essential Fish Habitat**, the Sierra Club believes the Corps errs when it says that its “initial determination is that the proposed action would not have a substantial adverse impact on Essential Fish Habitat”. It is obvious that wetlands on the proposed DMPA site filter and clean water that fish need for nursery and breeding areas. In addition, these wetlands provide nutrients and organic matter to nursery areas for blue crabs, brown shrimp, white shrimp, mullet, spotted seatrout, red drum, and many other fish, crustaceans, and other organisms that provide food for humans, estuaries, and Gulf food webs.

- 9) **Page 4, Public Interest Review Factors**, the Public Notice is inadequate as the basis for determining the environmental impacts of this proposal and the effect that it will have on the public interest review factors in 33 CFR 320-332, regulatory programs of the Corps, and other pertinent laws, regulations, and executive orders.

Some of the public interest review factors that must be considered and are relevant are conservation, economics, aesthetics, air quality, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, and the needs and general welfare of the people.

The public interest factors analysis is very important and is separate and larger than simply reviewing the proposed dredge/fill impacts and proposed mitigation. The Corps should prepare its analysis of public interest factors carefully when reviewing this proposal and then provide it for public review and comment.

- 10) The Sierra Club is concerned about the trustworthiness of Freeport LNG. It is the Sierra Club's understanding that the Federal Energy Regulatory Commission (FERC) is pursuing an action against Freeport LNG because it created larger work areas than allowed during construction of an LNG project which impacted and degraded more wetlands and or habitats.

In addition, Freeport LNG was supposed to transfer land with a conservation easement to the Town of Quintana for Xeriscape Park as mitigation for the impacts due to an LNG project. Then the Town of Quintana was supposed to transfer the conservation easement to the Gulf Coast Bird Observatory. However, Freeport LNG never transferred all the land that was part of the mitigation commitment and has not provided the conservation easement to the Town of Quintana.

Now Freeport LNG has proposed putting a pipeline easement (right-of-way) through Xeriscape Park. It is doubtful that the Town of Quintana will be given the conservation easement that it was supposed to have as mitigation for previous impacts from an LNG project that Freeport LNG constructed. Because of these problems, the Corps should investigate Freeport LNG's history regarding mitigation commitments. The Corps should ensure that any promised mitigation is completed and is not subject to further environmental impacts by Freeport LNG.

- 11) **Page 1, 1.0 Introduction, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the applicant talks as if this location, Bastrop Bayou Permittee Responsible Mitigation Plan (BBPRMP), will be used as a mitigation bank. See also **December 20, 2016 letter from the U.S. Army Corps of Engineers to the JMB Land Co., L.P., Attachment F: Evaluation Letter**. If this is true, then the applicant should submit all information required for a mitigation bank and the Corps



should require a public notice with a review and comment period for a mitigation bank.

- 12) **Pages 1 and 2, 2.0 Project Goals and Objectives, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the applicant refers to herbaceous prairie wetland habitat. The applicant does not state how the type of wetlands that will be destroyed in the leveed area relate and compare to the wetlands that are proposed as replacements. See **Page 3, 3.1 Impacted Wetland Habitat Descriptions**, where a more saline type of wetlands that exists on the proposed project site will be destroyed. Since prairies include upland areas, the applicant does not delineate the upland areas that are not wetlands but assumes all 116.7 acres and 56.6 acres are wetlands. This is not conceivably true and therefore the applicant underestimates how many wetlands it needs to replace those in the proposed leveed site. It appears that the applicant advocates out-of-wetland type for this proposed mitigation. The Sierra Club requests that the Corps require an analysis by the applicant that compares the two wetland sites and states why out-of-wetland type mitigation is appropriate for this proposal.
- 13) **Pages 1 and 2, 2.0 Project Goals and Objectives, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the applicant should explain how the use of herbicides affects non-target plants, people, and what herbicides will be used and their health effects. It is not clear on **Table 1**, how non-jurisdictional wetlands and non-wetlands can be turned magically into jurisdictional wetlands. On **Page 5, 6.3.1 Jurisdictional Determination**, 116.7 acres of lands that will be used for mitigation are called “non-wet pasture”. The applicant proposes that non-wetlands be turned into wetlands. Instead the applicant should emphasize the restoration and protection of wetlands.
- 14) **Page 4, 4.0 Mitigation Site Selection, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the Sierra Club favors additional acreage for mitigation. Since almost 200 acres of wetlands would be destroyed at one location and since created wetlands will not be equivalent in physical, biological, and chemical function to natural wetlands destroyed by this proposal, the Sierra Club recommends that the Corps require, at a minimum, a 3:1 ratio of wetlands be created. This means that at least 589.56 acres should be created and protected if this proposal is approved.
- 15) **Pages 4 and 5, 5.0 Site Protection Instrument and Attachment D. Conservation Holder and Servitude, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the Sierra Club does not support the use of a land trust that is not locally based. The Sierra Club supports the use of land trusts that are certified and locally based because they can more easily monitor, address, and respond to management needs.
- 16) **Pages 4 and 5, 5.0 Site Protection Instrument, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the applicant fails to discuss the apparent right-

of-way (ROW) that runs right through the middle of this proposed mitigation site as seen on **Figure 2**. This ROW fragments the mitigation bank and the habitat it represents and supposedly creates. The type of ROW that this is, is not acknowledged or discussed in the mitigation plan. The applicant also fails to discuss oil/gas mineral rights and the possibility of destruction or degradation of the mitigation plan, site, bank by these activities including more ROWs from oil/gas or other uses.

17) **Page 7, 6.4 Threatened and Endangered Species, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the applicant states that “he PRM would provide a buffer to future development around the refuge (Brazoria National Wildlife Refuge – BNWR). This statement is false. **Figure 1** documents that the BNWR is 2.8 miles away from the proposed mitigation site. The proposed mitigation site does not buffer the BNWR in any way. The mitigation site is out-of-watershed for the wetlands that will be destroyed and 11.1 miles away from the site of destruction. The Sierra Club believes the Corps should require that the applicant conduct wetlands mitigation within the same watershed where the wetlands are destroyed.

18) **Pages 9 and 10, 8.1.2 Vegetative Restoration, Table 6, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, many of the plant species listed are not wetland plants. Those plants that are listed as FAC, like Big Bluestem, Broomsedge Bluestem, Canada Wildrye, Rattlesnake Master, Little Bluestem, and Longspike Tridens can all live on sites, and in many cases normally do live on sites, that are upland, dry, or are not classified as wetlands.

In addition, the plants listed in **Table 6** are not saline dominant as are the plants listed on **Page 3, 3.1 Impacted Wetland Habitat Descriptions**, including Turtleweed, Gulf Cord Grass, Meadow Cord Grass, and Bushy Seaside-Tansy that will be destroyed by the proposal. Two very different wetlands are assumed to be equivalent and therefore can be substituted one for the other. The applicant replaces a more saline dominant wetland with a more freshwater dominant wetland. How the physical, chemical, and biological functions can be equivalent is not discussed by the applicant. The Corps should require the applicant to conduct such an analysis and provide it to the public for review and comment.

19) **Page 11, 9.0 Maintenance Plan, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the applicant should state what the schedule for prescribed burns is, both in frequency and in season. A 1 to 3 year burning cycle with a varied seasonal burn is likely the best burn schedule for coastal tall-grass prairie.

20) **Page 11, 10.0 Performance Standards Permittee Responsible Mitigation Plan Bastrop Bayou**, two growing seasons is not long enough to determine if native plants have successfully occupied a site. The Corps should require that at least five growing seasons be monitored.

- 21) **Page 12, 11.0 Monitoring Requirements, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the Corps should require that the applicant submit a list of non-native invasive plant species that will be monitored and controlled. The public should be able to review and comment on this list.
- 22) **Page 14, 13.0 Adaptive Management Plan, Draft Permittee Responsible Mitigation Plan Bastrop Bayou**, the Corps should require that any report be released to the public with a review and comment period. The Clean Water Act is a public law and the public should be able to comment on its implementation.
- 23) The Sierra Club requests that this permit application be sent back to the applicant to resolve the issues that the Sierra Club has raised in this comment letter. If this is not done, the permit application should be denied.

The Sierra Club appreciates this opportunity to provide public comment on this proposed permit application. Thank you.

Sincerely,

Brandt Mannchen  
Chair, Forestry Subcommittee  
Houston Regional Group of the Sierra Club  
20923 Kings Clover Court  
Humble, Texas 77346  
832-907-3615  
brandtshnfbt@juno.com



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200  
DALLAS, TEXAS 75202 – 2733

September 20, 2018

Mr. Jayson Hudson  
Policy Analysis Branch  
Regulatory Division, CESWG-RD-P  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, Texas 77553-1229

Dear Mr. Hudson:

The U.S. Environmental Protection Agency (EPA) Region 6 has reviewed Public Notice (PN) SWG-2013-00147, dated August 21, 2018. The applicant, Freeport LNG Development, L.P. (FLNG), proposes to construct and operate a long-term Dredge Material Placement Area (DMPA) by enclosing a 196.5-acre area with the construction of 25-foot-high levees with two outfall structures to return decant. Development of the site would require infrastructure improvements including site security infrastructure, construction of levees, equipment staging areas, and hay bale/sediment control dikes for construction and operation activities. Construction of the project is anticipated to impact 174.7 acres of palustrine emergent wetlands and 19.1 acres of palustrine scrub/shrub wetlands. The project site is located in wetlands to the east of the Brazos River, north of the Gulf Intracoastal Waterway, along Levee Road, southwest of Freeport, in Brazoria County, Texas.

In addition to reviewing the information provided in the PN, the EPA participated in a project site visit with representatives from the project, the U.S. Fish and Wildlife Service, and the Texas Parks and Wildlife Department on September 7, 2018. The following comments are being provided for use in reaching a decision relative to compliance with the EPA's *404(b)(1) Guidelines for the Specification of Disposal Sites for Dredged or Fill Material* (Guidelines) (40 CFR Part 230):

Upon review of the current proposal, the EPA has concerns whether the information provided by the applicant on the proposed project will sufficiently enable the U.S. Corps of Engineers Galveston District (Corps) to make a legally defensible permit decision in regard to compliance with the Guidelines. Under the Guidelines, no discharge of dredged or fill material may be permitted by the Corps if: (1) a practicable alternative exists that is less damaging to the aquatic environment so long as that alternative does not have other significant adverse environmental consequences, or (2) the nation's waters would be significantly degraded. Under the Guidelines, a project must incorporate all appropriate and practicable measures to first avoid impacts to wetlands, streams, and other aquatic resources and then minimize unavoidable impacts. After avoidance and minimization measures have been applied, the project must include appropriate and practicable compensatory mitigation for the remaining unavoidable impacts.

The Guidelines also require evaluation of all direct, secondary and cumulative impacts reasonably associated with the proposed discharge including effects on wildlife habitat, aquatic ecosystem diversity, stability and productivity, recreation, aesthetics, and economic values.

The applicant has indicated they have avoided and minimized the environmental impacts by conducting an alternatives analysis to assess the potential environmental impacts of practicable alternatives. The current analysis independently evaluates various options for beneficial use, federal DMPAs, offshore dredged material disposal sites (ODMDS), sediment diversions, and private DMPAs. In the alternatives analysis, the applicant has stated the purpose of the project is to develop a long-term solution for the annual placement of maintenance material dredged from the FLNG berth. Of the 10 screening criteria identified as part of the alternatives screening process, one of the alternative screening criteria identifies a maintenance dredging duration of 15 years as a capacity requirement. As it would be anticipated that the FLNG Berth will operate beyond a 15-year timeframe, the EPA recommends the applicant develop a comprehensive long-term dredged material management plan beyond the 15-year maintenance dredging horizon identified. The evaluation of disposal alternatives should additionally consider combinations of alternatives and incorporate an adaptive management approach for the on-going identification of available disposal options.

A separate alternatives screening criterion limits potential disposal to locations within 5 miles of the FLNG berth. It is unclear as to the need for the transport distance limitation as dredging activities are feasible beyond a 5-mile pump distance. The alternative analysis also states that FLNG would like to reserve the right to allow outside users to utilize the proposed long-term DMPA. This request would indicate that the design capacity for the proposed DMPA is greater than the maintenance dredging disposal need, and a potentially smaller DMPA footprint may be an option. Specific to beneficial use options, site alternatives were eliminated due to not having sufficient capacity for the full 15 years of maintenance dredging. Given the annual nature of the maintenance dredging activities, it is unclear as to the necessity for a single beneficial use site as dredging equipment is typically mobilized for each dredging event. In addition to evaluating the viability of a combinations of alternatives, the EPA recommends the applicant reconsider the screening criteria and provide additional alternatives evaluation information to assist the Corps in making its factual determinations and to help ensure the spirit of the Guidelines are met.

The alternatives analysis does include a section on cumulative and secondary impacts. The jurisdictional wetlands that would be impacted by this project not only provide wildlife habitat but also perform a range of valuable functions including water quality maintenance as well as stormwater and flood detention. Estuarine marshes provide buffering areas that mitigate the effects of waves. As stated in the alternatives analysis, coastal wetlands along the Texas Gulf Coast have been heavily impacted by cumulative development, including industrial activity, and this project would further contribute to impacts resources in the watershed.

The applicant has provided a draft permittee responsible mitigation (PRM) plan that includes mitigation for the proposed impacts by restoring 116 acres and enhancing 56.6 acres of palustrine emergent wetlands along Bastrop Bayou. One of the goals of the PRM plan is to create herbaceous prairie

wetlands, however, the impact site consists primarily of coastal marsh. The EPA has concerns that the currently proposed PRM will not provide in-kind replacement of the functions and habitats lost at the impact site. According to the information in the PN, the wetland delineation and impacts identified have not been verified by the Corps and details to support functional quality of the wetlands at the impact site and the proposed mitigation site have not been provided. Attachment B to the PRM plan includes an iHGM summary that presents the total physical, biological and chemical functional capacity units at the impact site and the proposed mitigation site based upon a functional assessment using the riverine herbaceous/shrub interim hydrogeomorphic model (iHGM). As the impact site appears to consist of a brackish coastal marsh environment, the applicant should conduct a wetlands assessment using an appropriate functional assessment (i.e., tidal fringe model) to ensure replacement of functional losses at the proposed impact site. The EPA recommends that the applicant conduct in-kind mitigation to compensate for the proposed impacts, and if out-of-kind mitigation is authorized, a mitigation ratio multiplier should be applied. Additionally, given the potential time between direct impacts being realized by construction activities at the proposed project site and the PRM achieving success criteria, it may also be appropriate to require additional mitigation for temporal losses that occur. If it has not yet done so, we recommend the applicant submit documentation supporting the appropriate functional assessments to the Corps to assist with ensuring in-kind mitigation requirements are fulfilled.

PRM plan mitigation success criteria and monitoring requirements should be sufficiently robust to ensure the mitigation approach effectively compensates for the significant project wetland impacts. The proposed PRM plan performance standards include vegetation coverage, a limitation on invasive species, and the presence of all wetland indicators. To clarify the vegetative coverage standard, the percent areal coverage should be based upon desired wetland species. We further recommend incorporating performance standards in all wetland areas for vegetative community composition/species diversity that are based on data from reference area wetlands. The PRM monitoring requirements are currently proposed for a period of 5 years. If the performance standards are not achieved within the first 2 growing seasons, the EPA recommends the monitoring requirements be extended beyond the identified 5-year period.

The PRM plan includes a section on long-term management and financial assurances. FLNG, or its assignee, would be the responsible party for long-term management and provide the necessary funds for maintenance activities. Short-term and long-term financial assurances would be put in place prior to permit issuance. The EPA recommends the applicant develop a specific itemized budget for the short-term financial assurances and a detailed average annualized long-term management costs. The applicant should also demonstrate that the amount of the proposed long-term funding endowment will be adequate to maintain and manage the aquatic resources on the site and defend the conservation easement in perpetuity, considering inflation and any investment fees. The EPA recommends this information to be provided to the Corps for evaluation.

In summary, the EPA recommends the Corps work with the applicant to enhance the information provided to assist the Corps in determining compliance with the Guidelines and provide supplemental information to ensure adequate compensatory mitigation is provided for all unavoidable impacts.

Thank you for the opportunity to review and comment on this PN, and if you have any questions on these comments, please contact Paul Kaspar of my staff, at [kaspar.paul@epa.gov](mailto:kaspar.paul@epa.gov) or 214-665-7459.

Sincerely,



for  
Maria L. Martinez  
Wetlands Section Chief

cc: U.S. Fish and Wildlife Service, Clear Lake, TX  
National Marine Fisheries Service, Galveston, TX  
Texas Commission on Environmental Quality, Austin, TX  
Texas Parks and Wildlife Department, La Marque, TX





September 20, 2018

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Carter P. Smith  
Executive Director

Mr. Jayson Hudson  
Regulatory Division  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, Texas 77553-1229

401 Coordinator  
Mail Code 150  
TCEQ  
P.O. Box 13087  
Austin, Texas 78711-3087

Re: SWG-2013-00147  
Freeport LNG Development, L.P.

Texas Parks and Wildlife Department (TPWD) has reviewed the public notice, issued August 21, 2018, for a proposed modification to permit number SWG-2013-00147. The applicant requests authorization to construct and operate a private placement area (PA) for disposal of maintenance dredge material as the preferred alternative to their previously permitted offshore disposal. Routine maintenance dredging would generate 500,000 cubic yards of material annually for a 15-year period. The project site is located east of County Road 7164 and south of the U.S. Army Corps of Engineers (USACE) – Galveston District's PA 1 in Freeport, Brazoria County, Texas. The proposed project would permanently impact about 193.8 acres of estuarine wetlands. Compensation for wetland impacts is proposed as restoration of freshwater, herbaceous wetlands near Bastrop Bayou.

TPWD participated in a site visit on September 7, 2018 with the applicant's environmental consultant and staff from the U.S. Fish and Wildlife Service and Environmental Protection Agency (EPA). The 196.5-acre project area is an undeveloped tract. Habitat at the site consists almost entirely of brackish marsh, and the attachment lists the plant species observed by TPWD. A Great Egret *Ardea alba* and Sheepshead Minnows *Cyprinodon variegatus* were also observed.

Three mapping designations support TPWD's on-the-ground characterization of the proposed PA site's habitat as estuarine-type wetland. First, about 90% of the site is mapped as Velasco clay soil, and Crenwelge et al. (1981) described the native vegetation of this soil as "that of a salt marsh." Second, the Ecological Mapping Systems of Texas (Elliott et al. 2014; <https://tpwd.texas.gov/gis/team>) identifies the entirety of the site as "Texas Coast Salt and Brackish Tidal Marsh." Third, Enwright et al. (2014) identifies the site as saline and brackish marsh.

TPWD is concerned that the proposed permittee-responsible mitigation (PRM) plan is out-of-kind and will not appropriately compensate for loss of estuarine wetland functions. The PRM site is located in a coastal prairie landscape setting. Indeed, Section 2.0 of the proposed PRM plan states that the site would "restore the natural historical herbaceous prairie wetland habitat." In addition, none of the 27 species proposed for planting, except for *Spartina patens*, occur at the proposed PA site.



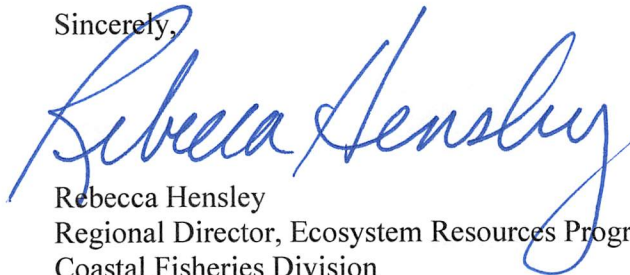
**Recommendations:**

- The applicant revise their compensatory mitigation by developing an estuarine wetland PRM plan located within the EPA Level IV Mid-Coast Barrier Islands and Coastal Marshes ecoregion and within U.S. Geological Survey Hydrologic Unit Code 12040205 (Austin-Oyster) or 12090401 (San Bernard). For example, the applicant could consider their property adjacent to Oyster Creek identified as Beneficial Use Site D in their Environmental Analysis document, dated June, 2018.
- The USACE – Galveston District re-coordinate this project with a 30-day public notice to allow resource agencies and other members of the public an opportunity to review and comment on the revised compensatory mitigation plan.

TPWD requests the applicant continue to coordinate with the resource agencies and other entities regarding beneficial use for disposal of maintenance dredge material.

Questions can be directed to Mr. Mike Morgan (281-534-0146) at the Dickinson Marine Lab.

Sincerely,



Rebecca Hensley  
Regional Director, Ecosystem Resources Program  
Coastal Fisheries Division

RH:CR:MNM

Attachment

**References:**

Crenwelge, G.W., J.D. Crout, E.L. Griffin, M.L. Golden, and J.K. Baker. 1981. Soil survey of Brazoria County, Texas. Soil Conservation Service, Washington D.C.

Elliott, L.F., D.D. Diamond, C.D. True, C.F. Blodgett, D. Pursell, D. German, and A. Treuer-Kuehn. 2014. Ecological Mapping Systems of Texas: Summary Report. Texas Parks & Wildlife Department, Austin, Texas.

Enwright, N.M., S.B. Hartley, M.G. Brasher, J.M. Visser, M.K. Mitchell, B.M. Ballard, M.W. Parr, B.R. Couvillion, and B.C. Wilson. 2014. Delineation of marsh types of the Texas coast from Corpus Christi Bay to the Sabine River in 2010. U.S. Geological Survey Scientific Investigations Report 2014-5110. U.S. Geological Survey, Reston, Virginia.

Plant species observed on September 7, 2018 at the proposed Freeport LNG dredge material placement area.

<b>Common Name</b>	<b>Scientific Name</b>
Saltmarsh bulrush	<i>Schoenoplectus robustus</i>
Saltgrass	<i>Distichlis spicata</i>
Saltwort	<i>Batis maritima</i>
Gulf cordgrass	<i>Spartina spartinae</i>
Marshhay cordgrass	<i>Spartina patens</i>
Annual glasswort	<i>Salicornia bigelovii</i>
Annual seepweed	<i>Suaeda linearis</i>
Carolina wolfberry	<i>Limonium carolinianum</i>
Sea-ox-eye daisy	<i>Borrchia frutescens</i>
High-tide bush	<i>Iva frutescens</i>

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## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

September 20, 2018

Mr. Jayson Hudson, Project Manager  
Galveston District CESWG-PE-RE  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, Texas 77553-1229

Re: USACE Permit Application No. SWG-2013-00147

Dear Mr. Hudson:

As described in the Joint Public Notice, dated August 21, 2018, the applicant, Freeport LNG Development, L.P., proposes to construct and operate a long-term 196.5-acre Dredge Material Placement Area (DMPA). Development of the site would impact 196.5 acres of wetlands. The project site is located in wetlands to the east of the Brazos River, north of the Gulf Intracoastal Waterway, along Levee Road, southwest of Freeport, in Brazoria County, Texas.

The applicant is proposing permittee-responsible-mitigation through restoring 116 acres and enhancing 56.6 acres of palustrine emergent wetlands along Bastrop Bayou.

In addition to the information contained in the public notice, the following information is needed for review of the proposed project. Responses to this letter may raise other questions that will need to be addressed before a water quality certification determination can be made.

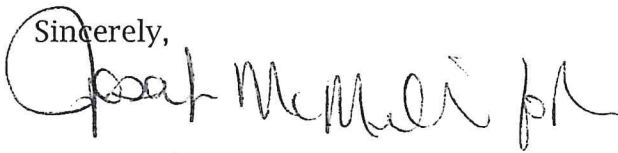
1. Mitigation of impacts is considered for "...all unavoidable adverse impacts that remain after all practicable avoidance and minimization has been completed..." (30 TAC §279.11(c)(3)). The applicant's mitigation plan may be inadequate. Restored, enhanced, or created wetlands may not function as well as naturally occurring wetlands. Please have the applicant address how it was concluded that the mitigation plan could generate enough functional lift to compensate for existing, naturally-occurring wetlands, or revise the mitigation plan accordingly.

Mr. Jayson Hudson, Project Manager  
Page 2  
September 20, 2018

2. The performance standards in the applicant's mitigation plan were based on aerial coverage, whereas the mitigation accounting was based on achieving large amounts of functional lift. The Texas Commission on Environmental Quality (TCEQ) recommends that the performance standards include reasonably achievable targets for ecological lift as calculated by functional capacity unit milestones.
3. The wetlands in the impact site appear to be tidally influenced and contain both fresh and salt water, whereas the proposed mitigation site may only receive freshwater inflows. This does not appear to represent in-kind mitigation. Please have the applicant explain in detail how the proposed mitigation is in-kind, or revise the mitigation plan to include in-kind replacement of aquatic resources.

The TCEQ appreciates the opportunity to comment and looks forward to receiving and evaluating other agency or public comments. Please provide any agency comments, public comments, as well as the applicant's comments, to Mr. Jeff Paull of the Water Quality Division MC-150, P.O. Box 13087, Austin, Texas 78711-3087. Mr. Paull may also be contacted by e-mail at [jeff.paull@tceq.texas.gov](mailto:jeff.paull@tceq.texas.gov), or by telephone at (512) 239-1649.

Sincerely,

A handwritten signature in black ink, appearing to read "David W. Galindo", with a stylized "D" and "G".

David W. Galindo, Director  
Water Quality Division  
Texas Commission on Environmental Quality

DWG/JP/fc

Enclosure

ccs: Michael Stephenson, Freeport LNG Development, L.P., 333 Clay Street, Suite 5050,  
Houston, Texas 77002  
Marisa Weber, Lloyd Engineering, Inc., 6565 West Loop South, Suite 708, Bellaire,  
Texas 77401